

REMARKS

The Final Office Action mailed December 31, 2007 has been received and carefully noted. Claims 1, 2, and 4-20 are currently pending in the subject application and are presently under consideration.

No claims have been amended, canceled, or added in the present Reply. A listing of claims can be found on pages 2-8 of this Reply.

Favorable reconsideration of the pending claims is respectfully requested in view of the following comments.

I. Rejection of Claims 1, 2, and 5-20 Under 35 U.S.C. § 103(a)

Claims 1, 2, and 5-20 stand rejected under 35 U.S.C. § 103(a) as being obvious over McMahon *et al.* (U.S. 5,784,699), Donahue *et al.* (Hardware Support for Fast and Bounded-Time Storage Allocation, March 22, 2002), and Rawlings, III (U.S. 5,479,656). The Applicants respectfully request that these rejections be withdrawn for at least the following reason. McMahon *et al.*, Donahue *et al.*, and Rawlings, III, alone or in combination, do not teach or suggest all the claim limitations expressly, impliedly, or obviously.

To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 706.02(j). The present Application involves a memory management apparatus and method for storing data in units of variable size packets in appliances utilizing memory devices. A memory allocation apparatus includes a data memory, a free list memory, and registers. The data memory contains a plurality of data blocks, each of which includes a plurality of sub data blocks. The free list memory manages the free memory space of the data memory such that the number of entries in the data memory and the number of entries in the free list memory are equal and are situated in a 1:1 relationship. The 1:1 relationship means that entry number 1 of the free list memory contains information corresponding to entry number 1 of the data memory. Accordingly, the use of

pointers between entries of the data memory and the entries of the free list memory are unnecessary.

In particular, independent claims 1, 14, and 17 recite: “all of the entries of the free list memory and all of the entries of the data memory have a 1:1 corresponding relationship, wherein use of pointers between the entries of the data memory and the entries of the free list memory is unnecessary.” McMahon *et al.*, Donahue *et al.*, and Rawlings, III, alone or in combination, do not teach or suggest these aspects.

The Examiner concedes that McMahon *et al.* and Donahue *et al.* do not teach these aspects, but contends that Rawlings, III teaches these aspects at col. 14, ll. 53-57 (*See* Final Office Action mailed December 31, 2007, pg. 4). The Applicants respectfully disagree.

Rawlings, III generally involves a data port file system in which information for maintaining the file system is always updated to the data port and/or always located in system memory during computer operations. In one aspect, linked list of memory blocks can be used with a used list and a free list. The used list indicates which blocks of the memory blocks are used (unavailable) and the free list indicates which blocks of the memory blocks are free (available).

In col. 14, ll. 53-57 (and corresponding Figure 26), Rawlings, III describes a configuration where a linked list of MemBlocks would correspond to a used list that indicates which blocks of the memory blocks are used (unavailable) and a free list that indicates which blocks of the memory blocks are free (available) (*See* Rawlings, III, col. 14, ll. 53-57). But as depicted in Figure 26, the free list and used list use pointers to indicate which blocks of MemBlock are free and used, respectively (*See Id.* at Figure 26). As shown, the used list is pointing to the top three blocks and the 5th and 6th block of MemBlocks and the free list is pointing to the middle and last block of MemBlocks (*See Id.*). Therefore, Rawlings, III does not teach or suggest the appropriate 1:1 relationship so that the use of pointers would be unnecessary.

In view of the foregoing, McMahon *et al.*, Donahue *et al.*, and Rawlings, III, alone or in combination, fail to teach or suggest all the claim limitations of the independent claims. In addition, claims 2, 5-13, 15, 16, and 18-20 directly or indirectly depend from independent claims 1, 14, and 17 and thus incorporate the limitations thereof. For at least the aforementioned reasons relating to the independent claims, the cited references also fail to teach or suggest all the

claim limitations of the dependent claims. Accordingly, it is respectfully requested that these rejections be withdrawn.

II. Rejection of Claim 4 Under 35 U.S.C. § 103(a)

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being obvious over McMahon *et al.*, Donahue *et al.*, and Murdocca *et al.* (Principles of Computer Architecture Prentice Hall:270 2000). Claim 4 depends from independent claim 1 and thus incorporates the limitations thereof. The Examiner does not indicate and the Applicants do not discern any part of Murdocca *et al.* that cures the aforementioned deficiencies of McMahon *et al.*, Donahue *et al.*, and Rawlings, III with respect to independent claim 1. Therefore, for at least the above reasons regarding independent claim 1, McMahon *et al.*, Donahue *et al.*, and Murdocca *et al.* also fail to teach or suggest all the claim limitations of claim 4. Reconsideration and withdrawal of this rejection are respectfully requested.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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Robert Fiore

3/11, 2008